




















Lanes, Volumes, Timings
3: Mass Ave & Shirley/Newmarket

05/02/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	78	216	153	99	59	153	287	270	38	715	58
Future Volume (vph)	27	78	216	153	99	59	153	287	270	38	715	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Fr _t		0.909			0.944				0.850		0.989	
Fl _t Protected		0.996		0.950			0.950				0.998	
Satd. Flow (prot)	0	1702	0	1787	1719	0	1787	1863	1615	0	3502	0
Fl _t Permitted		0.996		0.950			0.232				0.920	
Satd. Flow (perm)	0	1702	0	1787	1719	0	436	1863	1615	0	3228	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		91			26							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		520			563			401			394	
Travel Time (s)		11.8			12.8			9.1			9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	3%	0%	1%	1%	10%	1%	2%	0%	8%	1%	7%
Adj. Flow (vph)	29	85	235	166	108	64	166	312	293	41	777	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	349	0	166	172	0	166	312	293	0	881	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		0	0	0	1	0	
Detector Template	Left			Left						Left		
Leading Detector (ft)	20	50		50	50		0	0	0	20	0	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	50		50	50		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Split	NA		Split	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	4	4		3	3			2	3		6	
Permitted Phases							2		2		6	
Detector Phase	4	4		3	3		2	2	3		6	
Switch Phase												
Minimum Initial (s)	17.0	17.0		8.0	8.0		26.0	26.0	8.0	26.0	26.0	
Minimum Split (s)	27.0	27.0		14.0	14.0		33.0	33.0	14.0	33.0	33.0	
Total Split (s)	28.0	28.0		23.0	23.0		49.0	49.0	23.0	49.0	49.0	
Total Split (%)	28.0%	28.0%		23.0%	23.0%		49.0%	49.0%	23.0%	49.0%	49.0%	
Maximum Green (s)	18.0	18.0		17.0	17.0		42.0	42.0	17.0	42.0	42.0	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	7.0	7.0		3.0	3.0		4.0	4.0	3.0	4.0	4.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)		10.0		6.0	6.0		7.0	7.0	6.0		7.0	
Lead/Lag	Lag	Lag		Lead	Lead				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		C-Max	C-Max	Min	C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		18.7		14.2	14.2		44.2	44.2	65.3		44.2	
Actuated g/C Ratio		0.19		0.14	0.14		0.44	0.44	0.65		0.44	
v/c Ratio		0.89		0.66	0.65		0.86	0.38	0.28		0.62	
Control Delay		55.7		52.8	45.5		67.3	21.2	8.2		24.4	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay		55.7		52.8	45.5		67.3	21.2	8.2		24.4	
LOS		E		D	D		E	C	A		C	
Approach Delay		55.7		49.1			26.2				24.4	
Approach LOS		E		D			C				C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	33.2
Intersection LOS:	C
Intersection Capacity Utilization:	97.1%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 3: Mass Ave & Shirley/Newmarket

